



Alternatives Considered

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Introduction and Legal Standard

FESA requires that the HCP specify what alternative actions to the proposed taking were considered by PALCO, and the reasons why such alternatives are not being utilized.

The EIR/EIS associated with the HCPISYP evaluates a range of alternatives to the proposed action, including alternatives to the “taking” of the species of concern proposed in the HCP. The reader is referred to the EIR/EIS for a more detailed description and evaluation of the alternatives.

Paralleling the alternatives analysis in the EIS/EIR, the HCP analyzes four principal alternatives to the proposed project. The alternatives are: (1) No Take; (2) Selective Harvest; (3) 61,000 Acre Reserve; and (4) Higher Midterm Production. Simply stated, these alternatives examine a no permit scenario, two increased conservation scenarios, and an increased harvest scenario. In addition, this section discusses various modifications to the principal alternatives that have been considered in the course of development of the HCP.

Alternative 1 - No Take

Under this alternative, PALCO would engage in forest management activities, and other covered activities, in a manner so as not to cause any “take” of a federally listed or state listed or candidate species. Since PALCO would not be taking any listed species, PALCO would not need, or obtain, an incidental take permit from either the U.S. Fish and Wildlife Service or the California Department of Fish and Game.

Pursuant to this alternative, neither the Headwaters Reserve nor the Marbled Murrelet Conservation Areas (MMCAs) would be established, and PALCO would have no obligation to engage in any of the measures proposed in the HCP to improve habit conditions within the HCP area.

Biological Implications

Overall, at the end of the permit period, PALCO’s landholdings would likely have substantially lower habitat values after being managed under the No Take alternative. Most importantly, the Headwaters Reserve and the MMCAs, including internal buffers on adjacent second growth and residual stands, will not be preserved or potentially set aside for the life of the permit. All areas on PALCO’s property, including old growth redwood, would be subject to harvest in accordance with the California Forest Practice Rules. Because FESA and CESA prohibit “take” of endangered and threatened species without requisite federal and state authorization, the extent of any harvest would depend on the results of surveys for listed species or consultation with USFWS and CDFG to develop site-specific take-avoidance measures. Harvest activities in areas that are not considered to be habitat for, or occupied by, listed species would not be subject to restrictions beyond those required by the Forest Practice Rules.

For example, since the listing of the Northern Spotted Owl (NSO), PALCO has engaged in harvest activities which do not result in “take” of NSO. In general, PALCO has conducted surveys in accordance with Fish and Wildlife Service protocols to determine the presence or absence of NSO within a harvest area. Harvest activities have been conducted in a fashion to avoid “take” of NSO. This experience suggests that PALCO forest management operations would continue in a manner very similar to that of recent years.

Timber salvage operations consistent with the Forest Practice Rules would be carried out in all areas, including old growth stands. Harvest activities in old growth areas believed to be occupied by the marbled murrelet would be carried out in a fashion that avoided “take” of the murrelet. Although the absence of harvest activities in occupied murrelet habitat would lessen impacts to the murrelet, fragmentation of second growth and residual stands in the proximity of old growth stands would continue with resulting increase in edge effects and potential predation on murrelets. And, as discussed in the Marbled Murrelet Conservation Plan (Volume IV Part B), the murrelet population on PALCO property would likely continue to decline and this decline would not be offset by the murrelet conservation measures proposed in the Plan.

Under this alternative, PALCO would not be required to engage in any of the measures designed to improve habitat conditions within the HCP area. For example, habitat-improving activities, such as road storm proofing, that it has committed to do as part of the HCP.

A specific strategy to prevent all take of listed aquatic species has not never been developed for PALCO's lands. A “no take” strategy might reasonably include default no-harvest stream buffers consistent with recommendations in FEMAT (see below, USDA 1993) for those watersheds in the HCP area containing listed aquatic species. (It should be noted, however, that the FEMAT prescriptions were not developed to be a “no take” strategy.) Then PALCO would, in coordination with the Wildlife Agencies, engage in a watershed analysis process to determine what precise prescriptions for each watershed would result in no take. In those watersheds of the HCP area that do not contain listed species, harvest activities would continue in accordance with State Forest Practice Regulations which do not prohibit timber harvesting adjacent to any riparian areas, but which impose certain requirements to minimize impacts to aquatic resources.

Rationale for Not Selecting This Alternative

This alternative has not been selected because it would not provide the following significant environmental benefits associated with the proposed HCP:

1. Protection of the Headwaters Reserve, including buffer areas around the old growth forest within the Reserve, in perpetuity;
2. Protection of the MMCAs and associated internal buffer areas in accordance with the HCP;
3. Comprehensive management of the HCP area to benefit the covered species, such as by providing for rotation of second growth forest stands in a manner that will insure a significant component of late seral forest, as well as other diverse forest habitats, throughout the term of the HCP;
4. Implementation of a comprehensive aquatics strategy including measures to address the effects of past activities on the aquatics system through road storm-proofing; and

5. Implementation of various conservation measures for non-listed covered species (e.g., measures proposed to protect and monitor amphibians, snag-dependent species and other non-listed species).

This alternative would have a number of negative environmental effects including:

- Fragmentation of second growth and residual stands adjacent to old growth areas with potential for resulting indirect impacts to old growth habitat areas through potential increased predation on marbled murrelets; and
- Impacts to the Headwaters Reserve and the MMCAs as a result of timber salvage activities.

In addition to the above environmental concerns, this alternative would result in continued economic uncertainty regarding the amount of harvest that might be expected from the PALCO property in the future and the resulting adverse economic impact to the economy of Humboldt County.

For example, a “no take” strategy for aquatic species based on FEMAT would result in a severe economic impact to PALCO. Modeling of the FEMAT strategy on PALCO's lands indicates that over 50% of the total land area could become unavailable for harvest. Also, in avoiding take of the NSO, PALCO would eventually be encumbered by the number of restricted harvest areas reserved for the NSO.

PALCO is the single largest taxpayer in Humboldt County, and the largest private employer in Humboldt County, employing over 1,600 persons.

Alternative 2 - Selective Harvest

Under this alternative, the Headwaters Reserve and the MMCAs would be established. Also, each individual MMCA would have a 0.5 mile no commercial harvest buffer around it to minimize edge effects in the residual stand and to enhance the development of old-growth habitat over time.

The difference between this alternative and the proposed HCP is in the silvicultural practices. No clear-cutting and no salvage logging would occur. Instead, tracts would be subject to selective harvest every 20 years with a timber stand target of late seral forest conditions (WHR6) . The maximum yearly harvest would be 2% of the timber inventory. In addition, a minimum of 20% of the property would have to be in late seral habitat.

Two possible subalternatives exist for riparian management: FEMAT-standard buffers maintained for the term of the permit, and FEMAT-standard buffers as interim measures with final buffers being determined using a Washington Department of Natural Resources (DNR) style watershed analysis.

FEMAT

A 1993 report by the Forest Ecosystem Management Assessment Team (FEMAT) described aquatic conservation strategies for federal lands within the range of the northern spotted owl. This strategy called for establishing large interim buffers along streams in which timber harvest would be severely restricted. These interim buffer widths were meant to be modified through a process of watershed analysis.

Applying the interim FEMAT standards to PALCO lands would generally result in no-harvest buffers of 340 feet on Class I Streams, 170 feet on Class II streams, and 100 feet on Class III streams. Salvage harvesting would be permitted only to respond to catastrophic events or if riparian management goals would not be adversely affected. Under this scenario, the interim buffer widths specified in FEMAT would be permanently retained.

DNR

Default interim buffer widths identified by FEMAT would be established. During the term of the permit, PALCO and the agencies would then engage in the same watershed analysis as contemplated in the HCP. This watershed analysis would be used to set final buffer widths and prescriptions. Where harvesting would be allowed, it would be subject to the same silvicultural prescriptions (i.e. selective harvest only) as the rest of the property.

Biological Implications

The silvicultural prescriptions in this alternative would have two significant adverse effects. First, in order to harvest the same amount of timber as PALCO would under its proposed Plan, PALCO will have to create more roads. Road impacts are seen as extremely significant, potentially causing both edge effects and increased sedimentation. Second, selective harvesting may result in understocked stands or stands that contain poorly distributed age classes. This would result from poor regeneration of shade-intolerant trees in selectively harvested stands and/or changes in age structure resulting from selective harvest.

The FEMAT buffers would preserve more riparian habitat than would the DNR process. However, as detailed in the Aquatic Species Conservation Plan (Part 3, Section D), there are many problems with the FEMAT aquatic strategy. These problems include: (a) FEMAT was developed for application to federal lands within the area of the Northwest Forest Plan, not private lands; (b) the strategy is generic to lands stretching from the US border with British Columbia to Northern California, rather than being specific to PALCO's lands; and (c) the FEMAT team itself recognized that their riparian buffers were an interim strategy only, pending the outcome of watershed analyses. The FEMAT report was published in 1993 and based on material for the most part compiled prior to 1992. It therefore no longer represents the best available science.

Rationale for Not Selecting This Alternative

This alternative was not selected because a selective harvest strategy would require extensive road construction. It would limit PALCO's ability to use best silvicultural practices to manage its forests. The net improvement in aquatic protection over that in the proposed Plan is uncertain but is probably limited. The alternative would also have a significant negative economic impact on PALCO. With respect to economic impacts, the FEMAT aquatic buffers alone would render unharvestable over 50% of PALCO's landownership. This alternative is also not expected to provide significant environmental benefits over those contemplated under the proposed Plan.

Alternative 3 - 61,000 Acre Reserve

Under this alternative, a no harvest reserve of approximately 61,415 acres would be established. The approximate design of the reserve would be a large circle encompassing the six redwood groves (Allen Creek, Shaw Creek, Bell-Lawrence, Right 9, Owl Creek, Elkhead Springs) and the Headwaters tract and buffer.

Outside of the reserve, the remainder of the property would be managed in the same manner as set forth in the proposed Plan.

Biological Implications

This alternative protects the most habitat over the term of the permit. The reserve would protect much of the high quality marbled murrelet habitat on PALCO's lands, as well as a significant percentage of the current and future northern spotted owl habitat. In addition, the watersheds running through the reserve would not be subject to any timber harvesting impacts.

Rationale for Not Selecting This Alternative

The reserve would make up approximately 30% of PALCO's total landholdings in the Plan area. This land contains a significant amount of PALCO's high quality old growth and other timber lands, including much younger forest lands essential to PALCO's economic future. PALCO is unwilling to commit such a large amount of land to habitat without compensation, and neither the federal nor the state endangered species acts require such a commitment.

The only method of creating the preserve, then, is through condemnation or voluntary sale. Neither the federal government nor the State of California has demonstrated that funds are available to acquire the reserve. The voters of the State of California have turned down ballot measures aimed at acquiring this property. The acquisition amount would far exceed any conservation acquisition undertaken by the federal and state governments since the enactment of the Land and Water Conservation Fund. In the absence of available funds, this alternative is not practicable.

Alternative 4 - Increased Midterm Production

This alternative was developed to determine the possible upper range of timber production on PALCO's lands. Under this alternative, PALCO would be permitted to engage in higher amounts of timber production during the midterm of the permit, and the watercourse and lake protection zone buffers would be narrowed. Limits on harvesting would be driven by the California Forest Practice Rules. Under this alternative, riparian buffers would be 125 feet for Class I streams and 75 feet for Class II streams with extensive timber harvest being allowed within these zones. In addition, no murrelet conservation areas would be established. However, the Headwaters tract and buffer would still be sold to the Federal and State governments.

Biological Implications

This alternative could have an adverse impact on the aquatic species found on PALCO lands and on the marbled murrelet when compared to the proposed HCP. This alternative would not provide riparian zone protections at levels deemed by the inter-agency and PALCO scientific team to be necessary to protect adequately aquatic resources. It is possible that a greater amount of "take" of marbled murrelet would occur than with the inclusion of the MMCA strategy.

Rationale for Not Selecting This Alternative

The primary reason for not selecting this alternative is that the potential amount of take resulting from harvest of all occupied murrelet stands outside of the Headwaters reserve was perceived as being too great by the USFWS and CDFG.

Other Alternatives

In the course of the development of the HCP, PALCO, both on its own initiative and at the request of the Agencies, considered a wide variety of other alternatives to one or more components of the HCP including the following:

Alternative 5 - No Elk River Timber Company involvement

This alternative was developed to revise the final timberland ownership in the eventuality that an agreement could not be reached with Elk River Timber Company on the value of their lands for inclusion in the agreement. Under this alternative, no Elk River Timber Company land would change ownership. The government would not acquire the Headwaters buffer area and the riparian buffers on the South Fork of Elk River that are currently owned by Elk River Timber Company. PALCO would not receive the 7,775 acres of Elk River Timber Company timberland that would have been transferred under the preferred alternative. All of the other mitigations proposed in the preferred alternative would apply.

Biological Implications

This alternative could have an adverse impact on aquatic species by reducing the protection measures that would have been implemented under federal management of the South Fork of Elk River. Protection would also be reduced for marbled murrelets. This alternative would reduced protection adjacent to the old growth stands in the main Headwaters area and reduce the acreage of future habitat development in the stands north of the main Headwaters stand. It is possible that a greater amount of take of marbled murrelets, who salmon and steelhead trout would occur than would occur under the preferred alternative.

Rationale for Not Selecting This Alternative

The primary reason for not selecting this alternative is that it would reduce protection measures and the belief that an agreement can be reached with Elk River Timber Company.